CLAIMS

1. A method for controlling individual data flows comprising data packets to a terminal in a communications system, said data flows being carried over at least one communications connection with a predetermined bandwidth and with use of at least one protocol which has parameters, said method including the steps of:

providing a memory in the terminal; a user entering information into the terminal, regarding the user's estimation of a degree of importance of at least one or more of the individual data flows to different applications on the terminal;

storing information about the user's preferences, based on said information entered by the user, in the memory of the terminal; and

controlling, through manipulation of at least one protocol parameter, a bandwidth proportion of an available bandwidth used by the individual data flows based on said stored information about the user's preferences.

2. A method according to claim 1, wherein the controlling step involves restricting a bandwidth proportion used by at least one first flow to at least one first application in order to give a larger bandwidth proportion to at least one second flow serving at least one second application.

3. A method according to claim 1, wherein the storing step includes assigning a port number to each of the individual data flows, and storing said information about the user's preferences for the respective individual data flows in a database in the terminal.

4. A method according to claim 1, wherein the step of controlling the bandwidth proportion used by individual data flows to the applications on the terminal includes:

investigating if a data packet to be sent from the terminal is an acknowledgment packet;

if the data packet is an acknowledgment packet, retrieving the stored information on the user's preferences associated with the data flow to the terminal with which the acknowledgment packet is associated;

determining by comparing a window size of the acknowledgment packet with retrieved information on the user's preferences to decide if the window size should be reduced, said window size defining a maximum amount of unacknowledged data packets that a receiver of the acknowledgment packet should be allowed to send to the terminal on the data flow with which the acknowledgment packet is associated; and

reducing the window size, based on said determining, by overwriting the window size with a lower value before sending said acknowledgment packet to the receiver.

5. A method according to claim 4, wherein the window size is overwritten when the acknowledgment packet is in a transport layer.

6. A method according to claim 4, wherein the window size is overwritten when the acknowledgment packet is in an Internet layer.

7. A method according to claim 4, wherein the window size is overwritten when the acknowledgment packet is in a physical layer.

8. A method for controlling individual data flows comprising data packets having associated sending times from a terminal to a receiver in a communications system, which data flows are carried over at least one communications connection with a predetermined bandwidth, said method including the steps of:

a user providing a memory in the terminal; entering information into the terminal regarding user's estimation of a degree of importance of one or more of the individual data flows from different applications on the terminal;

storing information about user's preferences based on said information entered by the user, in the memory in the terminal; and

controlling, through manipulation of sending times of data packets, a proportion of the available bandwidth used by the individual data flows from the applications on the terminal based on said stored information about the user's preferences.

9. A method according to claim 8, wherein the controlling step involves restricting the bandwidth proportion used by at least one first data flow from at least one first application in order to give a larger bandwidth proportion to at least one second data flow serving at least one second application.

10. A method according to claim 8, wherein the storing step includes assigning a port number to each of the individual data flows, and storing said information about the user's preferences for the respective individual data flows in a database in the terminal.

11. A method according to claim 8, wherein the step of controlling the bandwidth proportion used by individual data flows from the applications on the terminal includes;

investigating if a data packet to be sent from the terminal is an acknowledgment packet;

if the data packet is not an acknowledgment packet, retrieving the stored information on the user's preferences associated with the data flow from the terminal with which the data packet is associated;

determining by comparing the outgoing flow rate of the data flow with which the packet is associated to the retrieved information on the user's preferences to decide if it is time to send the data packet to said receiver; and

delaying the data packet, when it is not time to send it, until it is time to send the data packet to the receiver.

12. A communications terminal, for connection to a communications system by means of a communications connection with a predetermined bandwidth for carrying individual data flows, which terminal comprises at least one memory, at least one input device through which a user can enter information into the terminal, the communications terminal comprising:

a memory for storing information about a user's preferences, based on information entered by the user in the at least one input device, regarding the user's estimation of a degree of importance of at least one of the individual data flows to different applications on the terminal; and

a controller for controlling, through manipulation of at least one protocol parameter, a proportion of the available bandwidth used by the individual data flows to the applications on the terminal based on said stored information about the user's preferences.

13. A communications terminal according to claim 12, wherein the controller comprises a restrictor for restricting the bandwidth proportion used by at least one first flow to at least one first application in order to give a larger bandwidth proportion to at least one second flow serving at least one second application.

14. A communications terminal according to claim 12, comprising:

a database for storing said information about the user's preferences for the respective individual data flows in association with a port number assigned to the respective individual data flows.

15. A communications terminal according to claim 12, wherein the means for controlling the bandwidth proportion used by individual data flows to the applications on the terminal comprises:

circuitry for investigating if a data packet to be sent from the terminal is an acknowledgment packet;

a retriever for retrieving the stored information on the user's preferences associated with the data flow to the terminal with which the acknowledgment packet is associated;

comparator circuitry for comparing a window size of the acknowledgment packet to the retrieved information on the user's preferences to decide if the window size should be reduced, which window size defines a maximum amount of unacknowledged data packets that a receiver of the acknowledgment packet should be allowed to send to the terminal on the data flow with which the acknowledgment packet is associated; and

a reducer for reducing the window size by overwriting the window size with a lower value before sending said acknowledgment packet to the receiver.

16. A communications terminal according to claim 15, wherein the reducer for overwriting the window size is arranged to overwrite the window size when the acknowledgment packet is in a transport layer.

17. A communications terminal according to claim 15, wherein the reducer for overwriting the window size is arranged to overwrite the window size when the acknowledgment packet is in an Internet layer.

18. A communications terminal according to claim 15, wherein the reducer for overwriting the window size is arranged to overwrite the window size when the acknowledgment packet is in a physical layer.

19. A communications terminal, for connection to a communications system by means of a communications connection with a predetermined bandwidth for carrying individual data flows, the terminal comprising:

at least one input device through which a user can enter information into the terminal;

a memory for storing information about a user's preferences, based on information entered by the user into the at least one input device, regarding the user's estimation of a degree of importance of at least one of the individual data flows from different applications on the terminal; and a

controller for controlling, through manipulation of sending times of data packets, a proportion of the available bandwidth used by the individual data flows from the applications on the terminal based on said stored information about the user's preferences.

20. A communications terminal according to claim 19, wherein the controller comprises a restricting device for restricting the bandwidth proportion used by at least one first flow from at least one first application in order to give a larger bandwidth proportion to at least one second flow from at least one second application.

21. A communications terminal according to claim 19, wherein the terminal comprises a database for storing said information about the user's preferences for the respective individual data flows in association with a port number assigned to the respective individual data flows.

22. A communications terminal according to claim 19, wherein the controller is used by individual data flows from the applications on the terminal and comprises:

a flow control investigator for investigating if a data packet to be sent from the terminal is an acknowledgment packet;

a retriever connection for retrieving the stored information on the user's preferences associated with the data flow from the terminal with which the data packet is associated;

a circuit for determining by comparing the outgoing flow rate of the data flow with which the packet is associated to the retrieved information on the user's preferences to decide if it is time to send the data packet to a receiver; and

an element for delaying the data packet until it is time to send the data packet to the receiver.

23. A software program arranged to run on a communications terminal in a communications system, which terminal communicates by means of individual data flows carried over at least one communications connection with a predetermined bandwidth, said software program including:

code for storing, in a memory in the terminal, information about a user's preferences, based on information entered into the terminal by a user, about the user's estimation of a degree of importance of at least one of the individual data flows to different applications on the terminal; and

code for controlling, through manipulation of at least one protocol parameter, a bandwidth proportion of an available bandwidth used by the individual data flows to the applications on the terminal based on said stored information about the user's preferences.

24. A software program according to claim 23, wherein the code for controlling comprises code for restricting the bandwidth proportion used by at least one first flow to at least one first application in order to give a larger bandwidth proportion to at least one second flow to at least one second application.

25. A software program according to claim 23, wherein the software program comprises code for storing said information about the user's preferences for the respective individual data flows in a database in the terminal, in association with a port number assigned to the respective individual data flows.

26. A software program according to claim 23, wherein the code for controlling the bandwidth proportion used by individual data flows to the applications on the terminal comprises:

code for investigating if a data packet to be sent from the terminal is an acknowledgment packet;

code for retrieving stored information on the user's preferences associated with the data flow to the terminal with which the acknowledgment packet is associated;

code for determining by comparing a window size of the acknowledgment packet to the retrieved information on the user's preferences to decide if the window size should be reduced, said window size defining a maximum amount of unacknowledged data packets that a receiver of the acknowledgment packet should be allowed to send to the terminal on the data flow with which the acknowledgment packet is associated; and

code for reducing the window size by overwriting the window size with a lower value before sending said acknowledgment packet to the receiver.

27. A software program according to claim 26, wherein the code for overwriting the window size is arranged to overwrite the window size when the acknowledgment packet is in a transport layer.

28. A software program according to claim 26, wherein the code for overwriting the window size is arranged to overwrite the window size when the acknowledgment packet is in an Internet layer.

29. A software program according to claim 26, wherein the code for overwriting the window size is arranged to overwrite the window size when the acknowledgment packet is in a physical layer.

30. A software program arranged to run on a communications terminal in a communications system, which terminal communicates by means of individual data flows carried over at least one communications connection with a predetermined bandwidth, said software program including:

code for storing, in a memory in the terminal, information about a user's preferences, based on information entered into the terminal by a user, about the user's estimation of a degree of importance of at least one of the individual data flows from different applications on the terminal; and

code for controlling, through manipulation of sending times of data packets, a bandwidth proportion of the available bandwidth used by the individual data flows from the applications on the terminal based on said stored information about the user's preferences.

31. A software program according to claim 30, wherein the code for controlling comprises code for restricting the bandwidth proportion used by at least one first flow from at least one first application in order to give a larger bandwidth proportion to at least one second flow from at least one second application.

32. A software program according to claim 30, which comprises code for storing said information about the user's preferences for the respective individual data flows in a database in the terminal, in association with a port number assigned to the respective individual data flows.

33. A software program according to claim 30, wherein the code for controlling the bandwidth proportion used by individual data flows from the applications on the terminal comprises:

code for investigating if a data packet to be sent from the terminal is an acknowledgment packet;

code for retrieving stored information on the user's preferences associated with the data flow from the terminal with which the data packet is associated;

code for determining by comparing the outgoing flow rate of the data flow with which the packet is associated to the retrieved information on the user's preferences to decide if it is time to send the data packet to a receiver; and

code for delaying the data packet until it is time to send the data packet to the receiver.